

REMARKS

Claims 1-15, 21, 29-30, and 55-64 are pending. Claims 16-20 and 31-54 were previously canceled. Claims 1, 21, 29, 30, 57, 59, 61, and 63 are amended. Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested. Applicant appreciates the Examiner's willingness to conduct an interview in the present case. This Amendment and Response incorporates the substance of those discussions.

I. 35 U.S.C. § 112 CLAIM REJECTION

The Office rejected Claims 21 and 30 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office rejected Claims 1-15, 21, 29, 30, and 55-64 under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement and the enablement requirement. This rejection is respectfully traversed.

Applicant has amended Claims 21 and 30 to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Support for the amendment may be found at least at paragraphs 419 through 422 and paragraphs 436 through 448 of the present application as published.

Applicant has amended Claims 1-15, 21, 29, 30, and 55-64 to comply with the written description and enablement requirement. Claims 1-15, 21, 29, 30, and 55-64 as amended delete the phrase "in trans." As discussed during the interview, hnRNP A1 proteins including their RNA binding sites are highly conserved throughout many species, as described in paragraph 318 of the present published application. In

particular, the homology between the human and chicken hnRNP A1 and their RNA binding sites are shown in Figure 1b and Figure 2. Based upon the highly conserved nature of the hnRNP A1 proteins their RNA binding sites across species, it naturally follows that the RNA sequences that are capable of binding to these sites are must also be sufficiently homologous across species to bind to the hnRNP A1 RNA binding sites. Applicant respectfully requests the withdrawal of this rejection.

II. 35 U.S.C. § 102 CLAIM REJECTIONS

A. CLAIMS 1, 3, 5, 6, 11, 15, 29, 30 AND 55-60 ARE PATENTABLY DISTINGUISHABLE FROM BLANCHETTE, *ET AL.*

The Office rejected Claims 1, 3, 5, 6, 11, 15, 29, 30, and 55-60 under 35 U.S.C. § 102(b) as being anticipated by Blanchette, *et al.* This rejection is respectfully traversed.

Blanchette, *et al.* discloses the use of DNA sequences *located upstream and downstream* of the mouse hnRNP A1 exon 7B to control the inclusion of exon 7B in the spliced RNA. Blanchette at 1940. The polynucleotide sequences in Applicants' invention, unlike Blanchette, are RNA polynucleotide sequence(s). Claims 1, 29, 57, 59, 61, and 63 have been amended to reflect the use of RNA polynucleotide sequences. Since Claims 3, 5, 6, 11, 15, 30, 55, 56, 58, 60, 62, and 64 depend from and contain all the limitations of Claims 1, 29, 57, 59, 61, and 63, Claims 3, 5, 6, 11, 15, 30, 55, 56, 58, 60, 62, and 64 also point out and distinctly claim the subject matter which Applicant regards as an embodiment of the invention in the same manner as Claims 1 and 29. 35 U.S.C. § 112 (1994). Thus, Applicants' invention is patentably

distinguishable from Blanchette, *et al.* Applicant respectfully requests the withdrawal of this rejection.

**B. CLAIMS 1, 3, 14, 15, 21, 29, 30, 55-58, AND 61-64 ARE PATENTABLY
DISTINGUISHABLE FROM PURCELL AND MARTIN.**

The Office rejected Claims 1, 3, 14, 15, 21, 29, 30, 55-58, and 61-64 under 35 U.S.C. § 102(b) as being anticipated by Purcell and Martin. This rejection is respectfully traversed.

Purcell and Martin studied infecting HIV-1 virus to lymphocytes or human T-cell lines by contacting the cell lines with HIV-1 virus. Because Applicant uses RNA that does not include the HIV genome, Applicants' use of RNA polynucleotide sequences are distinguishable from Purcell and Martin's HIV genome. Claims 1, 29, 57, 61, and 63 have been amended to reflect the nature of the RNA polynucleotide sequences. Since Claims 3, 14, 15, 21, 30, 55, 56, 58, 62, and 64 depend from and contain all the limitations of Claims 1, 29, 57, 61, and 63, Claims 3, 14, 15, 21, 30, 55, 56, 58, 62, and 64 also point out and distinctly claim the subject matter which Applicant regards as an embodiment of the invention in the same manner as Claims 1, 29, 57, 61, and 63. 35 U.S.C. § 112. Thus, Applicants' invention is patentably distinguishable from Purcell and Martin. Applicant respectfully requests the withdrawal of this rejection.

III. 35 U.S.C. § 103 CLAIM REJECTIONS

A. CLAIM 4 IS PATENTABLY DISTINGUISHABLE OVER BLANCHETTE, *ET AL.* IN VIEW OF SAMBROOK, *ET AL.*

The Office rejected Claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Blanchette, *et al.* as applied to Claims 1, 3-6, 15, 29, 30 and 55-60, and further in view of Ross, *et al.* This rejection is respectfully traversed.

Blanchette, *et al.*, as stated *supra*, teaches the use DNA polynucleotides to alter the activity of RNA binding proteins. Blanchette at 1940. Unlike Blanchette, Applicants' invention introduces RNA polynucleotides into the cell to modify the activity of hnRNP A protein. Applicants' Application at 56-57, 66-67. Because Blanchette fails to teach RNA polynucleotides, the combination of Blanchette and Sambrook fail to teach all the claim limitations. See Manual of Patent Examining Procedure §§ 706.02(J), 2142 (8th ed. Rev. 1 2003) (hereinafter "MPEP"). Thus, Applicant's invention is patentably distinguishable over Blanchette, *et al.* in view of Sambrook, *et al.*

In addition, Claim 4 depends from Claim 1. Because of this dependency, Claim 4 is construed to incorporate all the limitations of Claim 1. See 35 U.S.C. § 112. As stated under the Section 102 analysis, Claim 1 is patentably distinguishable from the disclosures in Blanchette, *et al.* and thus, Claim 4 is thought to include all the limitations of Claim 1. Blanchette, *et al.* in view of Sambrook, *et al.* does not teach all the of the limitations and thus, Claim 4 is patentably distinguishable. Applicant respectfully requests the withdrawal of this rejection.

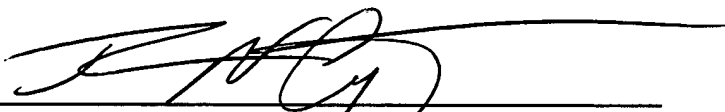
V. CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that the claims of the present invention define subject matter patentable over the references cited by the Office and that the application is in condition for allowance. Should the Office believe that anything further is desirable to place the application in better condition for allowance, the Office is invited to contact Applicants' undersigned attorney at the below listed telephone number.

The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to deposit account number 03-2469. Moreover, if the deposit account contains insufficient funds, the Commissioner is hereby invited to contact Applicant's undersigned representative to arrange payment.

Respectfully submitted,

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JOHN N. COULBY, Reg. No. 43,565
COLLIER SHANNON SCOTT, PLLC
3050 K Street, N.W., Suite 400
Washington, D.C. 20007
(202) 342-8400